

1 Amendments to the Claims:

2       This listing of claims will replace all prior versions, and  
3 listings, of claims in the application using (Original) (Currently  
4 Amended) (New) (Canceled) (Previously Presented) nomenclature, as  
5 recited in the below listing of claims.

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7 1. (Currently Amended) A system for communicating an analog input  
8 signal as a modulated binary laser signal over an optical  
9 communication medium recovered as a digital output signal, the  
10 system comprising

11       a sigma delta modulator for receiving the analog input signal  
12 and modulating the analog signal into a modulated symbol signal,

13       a transmitter for converting the modulated symbol signal into  
14 the modulated binary laser signal, and for transmitting the  
15 modulated binary laser signal over the optical communication  
16 medium, the modulated binary laser signal having a pulse width  
17 having a duration representative of the analog input signal, the  
18 modulated binary laser signal being transmitted asynchronously,

19       a receiver for receiving and detecting the pulse width of  
20 modulated binary laser signal for providing a received symbol  
21 signal, and

22       a digital filter for filtering the symbol signal into  
23 the digital output signal.

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1 2. (Currently Amended) The system of claim 1 wherein the  
2 transmitter comprises,

3 a symbol to binary converter for converting the modulated  
4 symbol signal from the sigma delta modulator into a converted  
5 digital signal, and

6 a pulse width modulator for modulating the laser signal by the  
7 converted digital signal into the modulated binary laser signal as  
8 a pulse width binary modulated laser signal communicated over the  
9 optical communication medium.

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11 3. (Original) The system of claim 2 wherein the receiver comprises,

12 a pulse width detector receiving the pulse width modulated  
13 binary laser signal and for providing a detected binary signal, and

14 a binary to symbol converter for converting the detected binary  
15 signal into the received symbol signal.

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18 4. (Previously Presented) The system of claim 3 wherein,

19 the pulse width detector is a pulse width quantizer detector,  
20 the detected binary signal is a detected quantized signal, and  
21 the binary to symbol converter converts the detected quantized  
22 signal into the received symbol signal.

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25 5. (Original) The system of claim 1 further comprising,

26 a timing recovery loop for generating a timing signal from the  
27 receive symbol signal for clocking the digital filter.

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1 6. (Original) The system of claim 1 wherein,

2 the sigma delta modulator is a first order sigma delta  
3 modulator.

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5 7. (Original) The system of claim 1 wherein,

6 the sigma delta modulator is a second order sigma delta  
7 modulator.

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9 8. (Currently Amended) The system of claim 1 wherein the optical  
10 communication medium is selected from the group consisting of free  
11 space and a fiber optic.

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13 9. (Canceled)

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15 10. Canceled)

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1 11. (Currently Amended) A system for communicating an analog input  
2 signal as a pulse width modulated binary laser signal over an  
3 optical communication medium recovered as a digital output signal,  
4 the system comprising

5 a sigma delta modulator for receiving the analog input signal  
6 and modulating the analog signal into a modulated symbol signal,

7 a transmitter for converting the modulated symbol signal into  
8 a converted digital signal for pulse width modulating a laser  
9 signal into the pulse width modulated binary laser signal, and for  
10 transmitting the pulse width modulated binary laser signal over the  
11 optical communication medium, the modulated binary laser signal  
12 having a pulse width having a duration representative of the analog  
13 input signal, the modulated binary laser signal being transmitted  
14 asynchronously through the optical communication medium,

15 a receiver for receiving and detecting the pulse width of the  
16 pulse width modulated binary laser signal to provide a detected  
17 binary signal and for converting the detected binary signal into a  
18 received symbol signal, and

19 a digital filter for filtering the symbol signal into  
20 the digital output signal.

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22 12. (Currently Amended) The system of claim 1 wherein the modulated  
23 digital laser signal is frame asynchronously communicated over the  
24 optical communication medium.

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1 13. (Currently Amended) The system of claim 11 wherein the  
2 modulated digital laser signal is frame ~~asynchronously communicated~~  
3 asynchronous communication over the optical communication medium.  
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5 14. (Currently Amended) The system of claim 1 wherein the modulated  
6 digital laser signal is for bit ~~asynchronously communicated~~  
7 asynchronous communications over the optical communication medium.  
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9 15. (Canceled)  
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11 16. (New) The system of claim 11 wherein the optical communication  
12 medium is selected from the group consisting of free space and a  
13 fiber optic.  
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